

FIG. 1

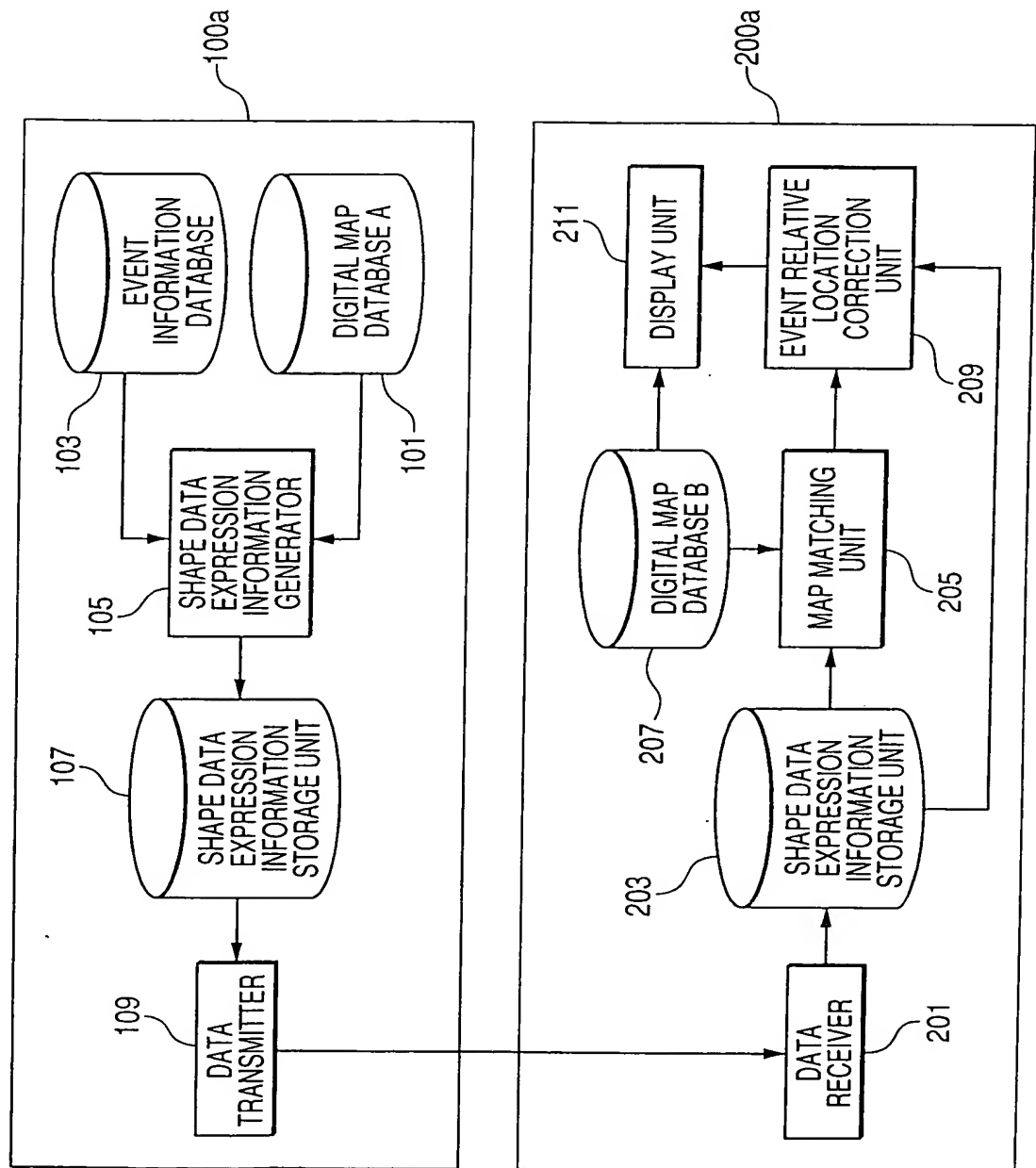


FIG. 2(a)

SHAPE DATA ARRAY

SHAPE DATA ARRAY IDENTIFICATION NUMBER=1
VECTOR DATA TYPE (=ROAD)
TOTAL LENGTH OF SHAPE DATA
TOTAL NUMBER OF NODES
NODE NUMBER p1
ABSOLUTE X-DIRECTIONAL NODE 1 COORDINATE (LONGITUDE)
ABSOLUTE Y-DIRECTIONAL NODE 1 COORDINATE (LATITUDE)
ABSOLUTE BEARING OF NODE 1
§
NODE NUMBER pN
ABSOLUTE X-DIRECTIONAL NODE N COORDINATE (xn)
ABSOLUTE Y-DIRECTIONAL NODE N COORDINATE (yn)
ABSOLUTE BEARING OF NODE N
§ §
SHAPE DATA ARRAY IDENTIFICATION NUMBER=56
§ §
SHAPE DATA ARRAY IDENTIFICATION NUMBER=100
§

FIG. 2(b)

EVENT INFORMATION

REFERENCE SHAPE DATA ARRAY NUMBER=56
EVENT 1 (=VEHICLE TRAFFIC SUSPENSION EVENT)
DETAILED EVENT INFORMATION (E.G., VEHICLE TRAFFIC SUSPENSION)
RELATIVE LOCATION (=De) OF EVENT
DIRECTION IDENTIFICATION FLAG (=1)
§
EVENT n (TRAFFIC CONGESTION)
CONGESTION RANK
RELATIVE LOCATION 1 (=Dj1) OF EVENT (CONGESTION START SIDE)
RELATIVE LOCATION 1 (=Dj2) OF EVENT (CONGESTION END SIDE)

FIG. 3

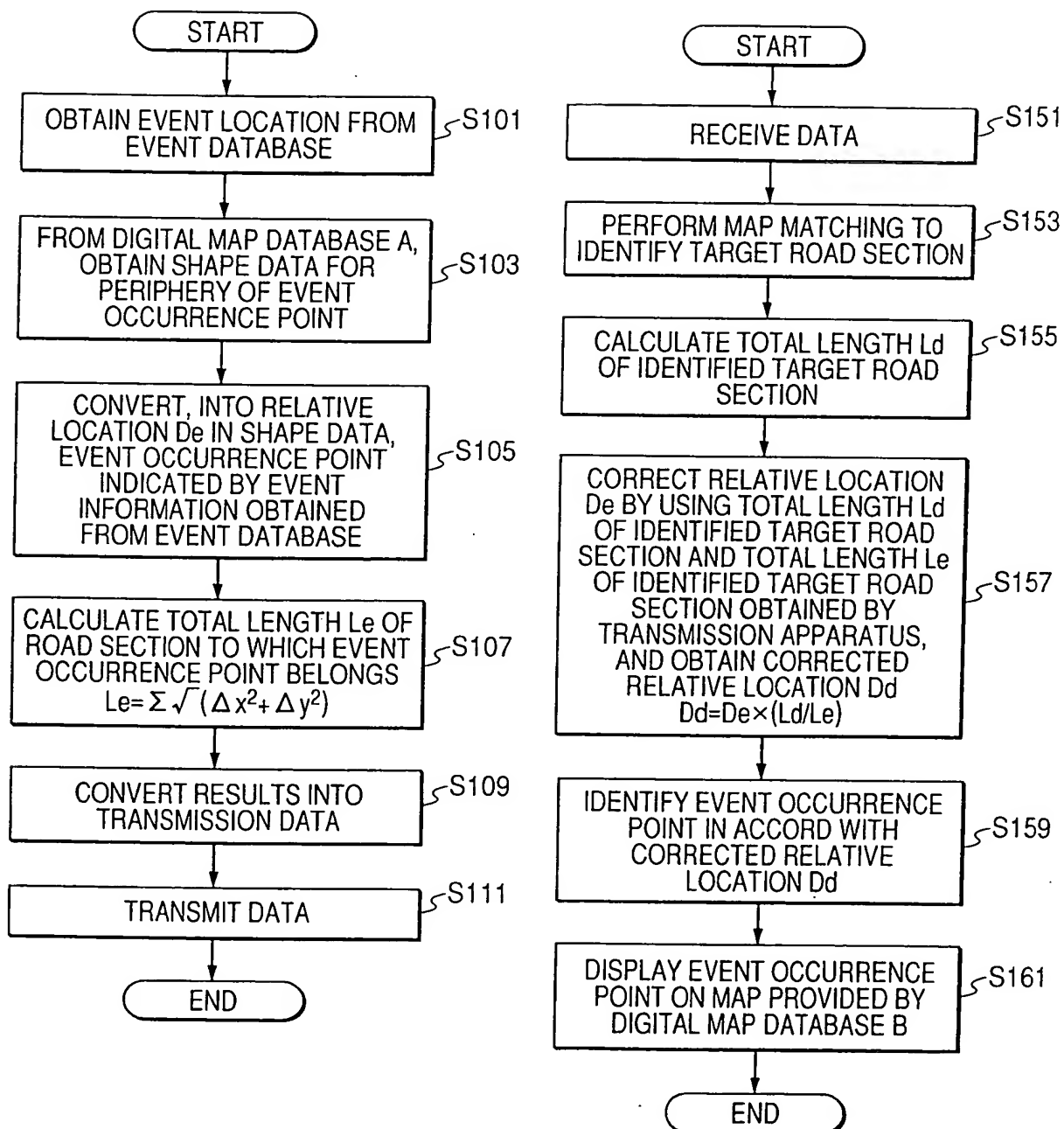


FIG. 4

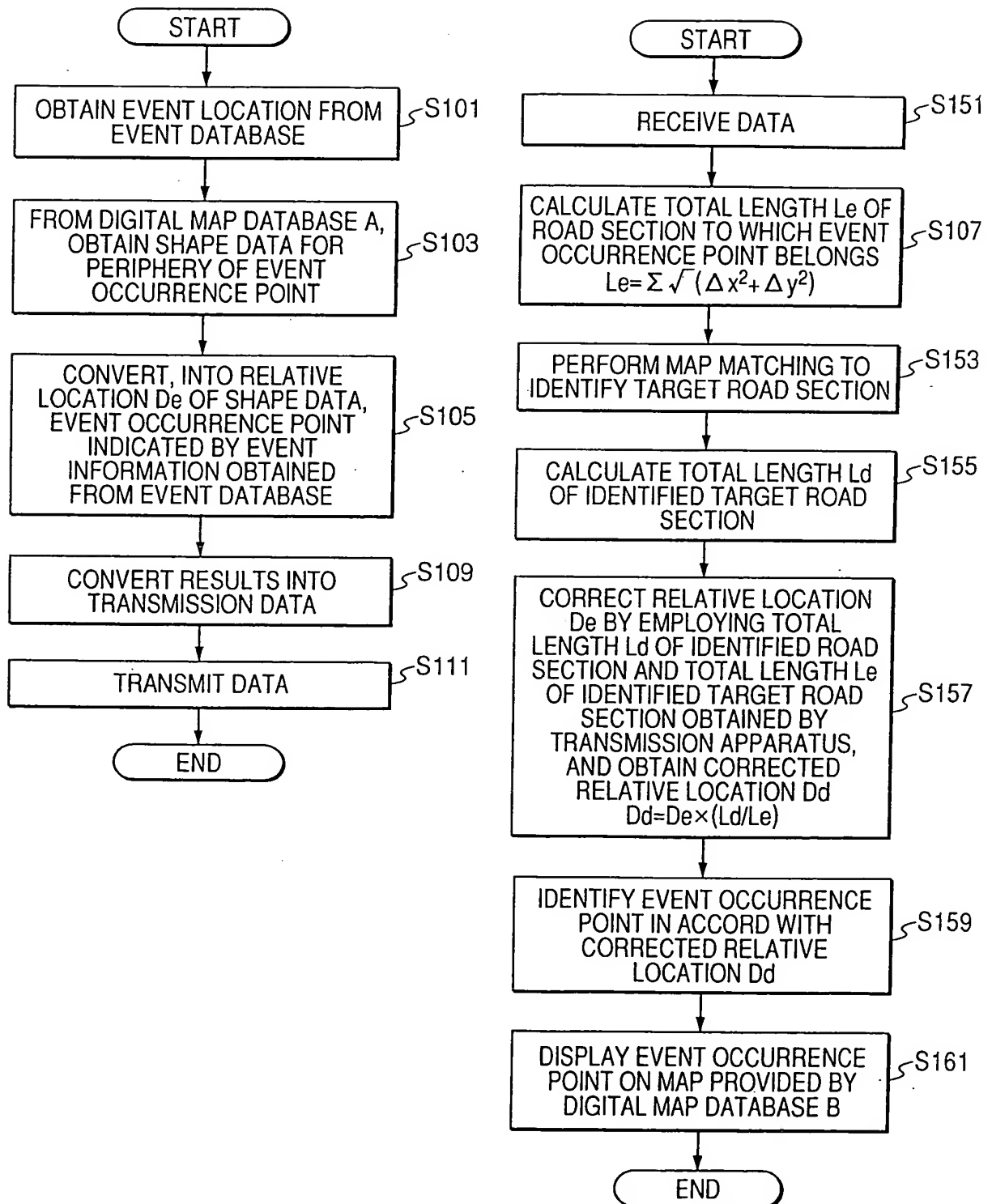


FIG. 5

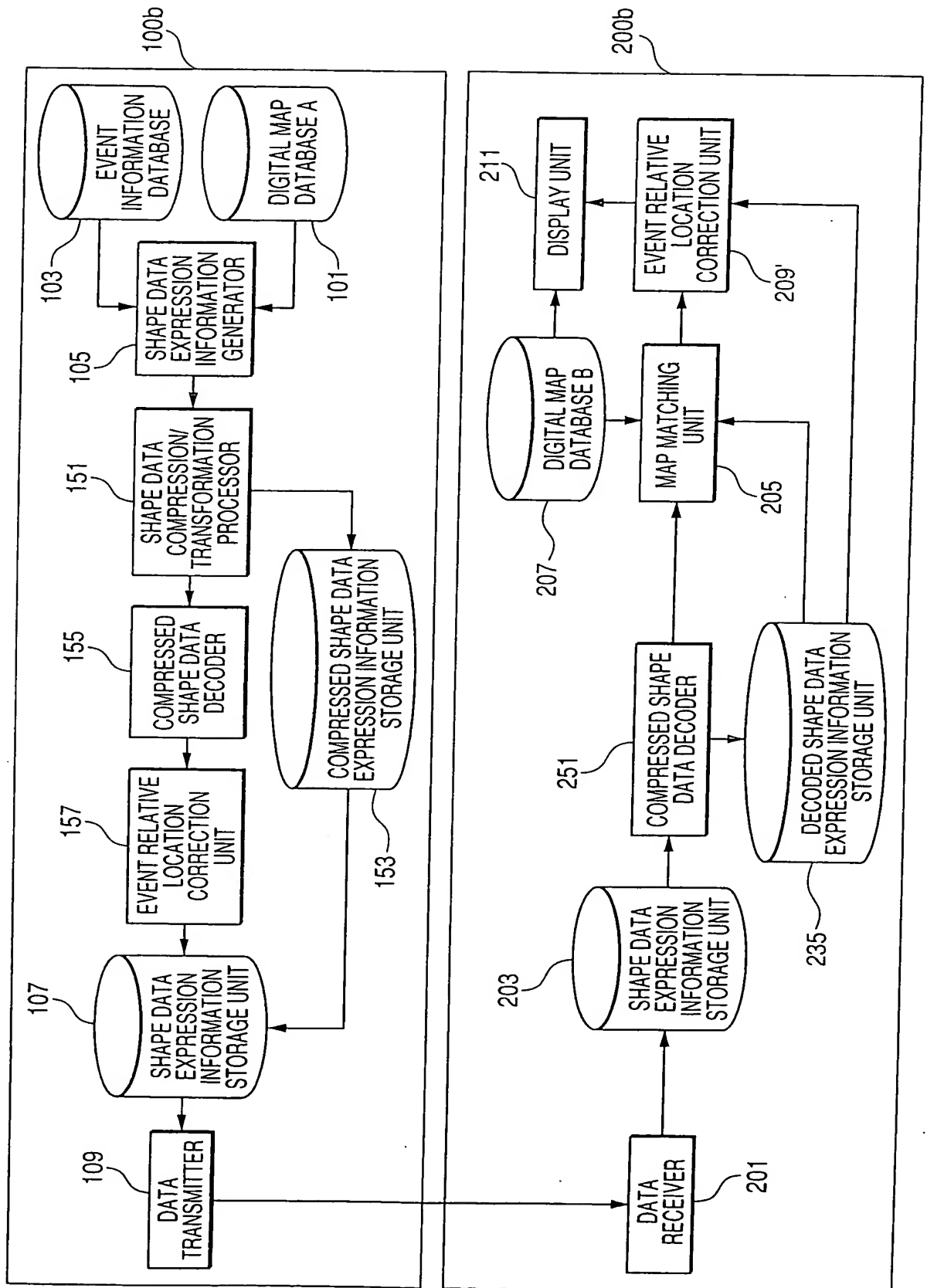


FIG. 6(a)

SHAPE DATA ARRAY

SHAPE DATA ARRAY IDENTIFICATION NUMBER=1
VECTOR DATA TYPE (=ROAD)
TOTAL NUMBER OF NODES (N)
ABSOLUTE X-DIRECTIONAL HEAD NODE 1 COORDINATE (LONGITUDE)
ABSOLUTE Y-DIRECTIONAL HEAD NODE 1 COORDINATE (LATITUDE)
ABSOLUTE BEARING OF HEAD NODE 1
DISTANCE L FROM HEAD NODE 1 TO SUCCEEDING SHAPE NODE
COMPRESSED/TRANSFORMED DATA FOR SHAPE BETWEEN HEAD NODE TO TERMINAL NODE
§ §
SHAPE DATA ARRAY IDENTIFICATION NUMBER=56
§ §
SHAPE DATA ARRAY IDENTIFICATION NUMBER=100
§

FIG. 6(b)

EVENT INFORMATION

REFERENCE SHAPE DATA ARRAY NUMBER=56
EVENT 1 (=VEHICLE TRAFFIC SUSPENSION EVENT)
DETAILED EVENT INFORMATION (E.G., VEHICLE TRAFFIC SUSPENSION)
RELATIVE LOCATION (=Da') OF EVENT
DIRECTION IDENTIFICATION FLAG (=1)
§
EVENT n (TRAFFIC CONGESTION)
CONGESTION RANK
RELATIVE LOCATION 1 (=Dj1') OF EVENT (CONGESTION START SIDE)
RELATIVE LOCATION 1 (=Dj2') OF EVENT (CONGESTION END SIDE)

FIG. 7

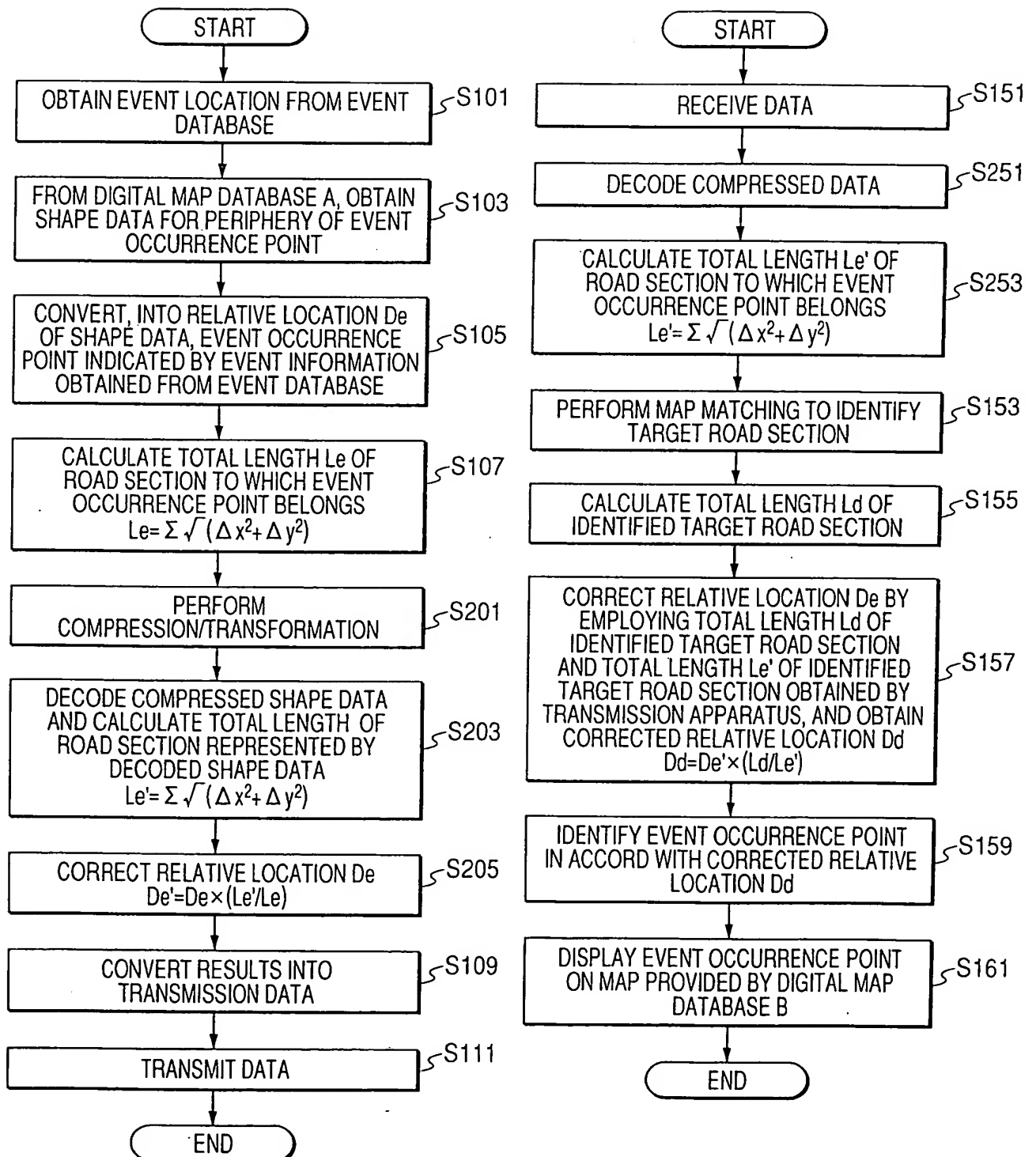


FIG. 8(a)

SHAPE DATA ARRAY

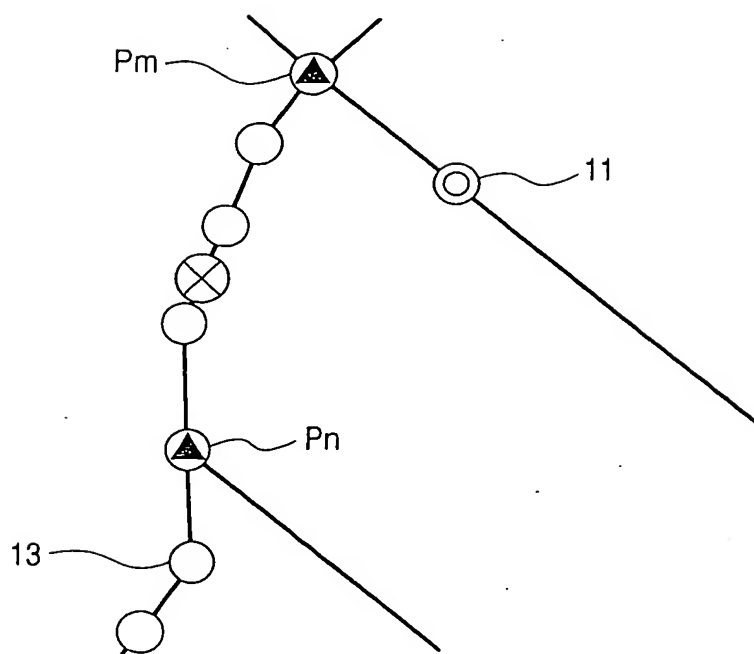
SHAPE DATA ARRAY IDENTIFICATION NUMBER=1
VECTOR DATA TYPE (=ROAD)
TOTAL NUMBER OF NODES (N)
ABSOLUTE X-DIRECTIONAL HEAD NODE 1 COORDINATE (LONGITUDE)
ABSOLUTE Y-DIRECTIONAL HEAD NODE 1 COORDINATE (LATITUDE)
ABSOLUTE BEARING OF HEAD NODE 1
DISTANCE L FROM HEAD NODE 1 TO SUCCEEDING SHAPE NODE
TRANSFORMED/COMPRESSED DATA FOR SHAPE BETWEEN HEAD NODE AND TERMINAL NODE
§ §
SHAPE DATA ARRAY IDENTIFICATION NUMBER=56
§ §
SHAPE DATA ARRAY IDENTIFICATION NUMBER=100
§

FIG. 8(b)

EVENT INFORMATION

REFERENCE SHAPE DATA ARRAY NUMBER=56	
EVENT 1 (=VEHICLE TRAFFIC SUSPENSION EVENT)	
DETAILED EVENT INFORMATION (E.G., VEHICLE TRAFFIC SUSPENSION)	
FEATURE NODE NUMBER 1 (P _m)	FEATURE NODE NUMBER 2 (P _n)
RELATIVE LOCATION (=De-1') OF EVENT FROM P _m	
DIRECTION IDENTIFICATION FLAG (=1)	
§	
EVENT n (TRAFFIC CONGESTION)	
CONGESTION RANK	
FEATURE NODE NUMBER 1 (P _m ')	FEATURE NODE NUMBER 2 (P _n ')
RELATIVE LOCATION 1 (=De-j1') OF EVENT FROM P _m ' (CONGESTION START SIDE)	
RELATIVE LOCATION 1 (=De-j2') OF EVENT FROM P _m ' (CONGESTION END SIDE)	

FIG. 9



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FIG. 10

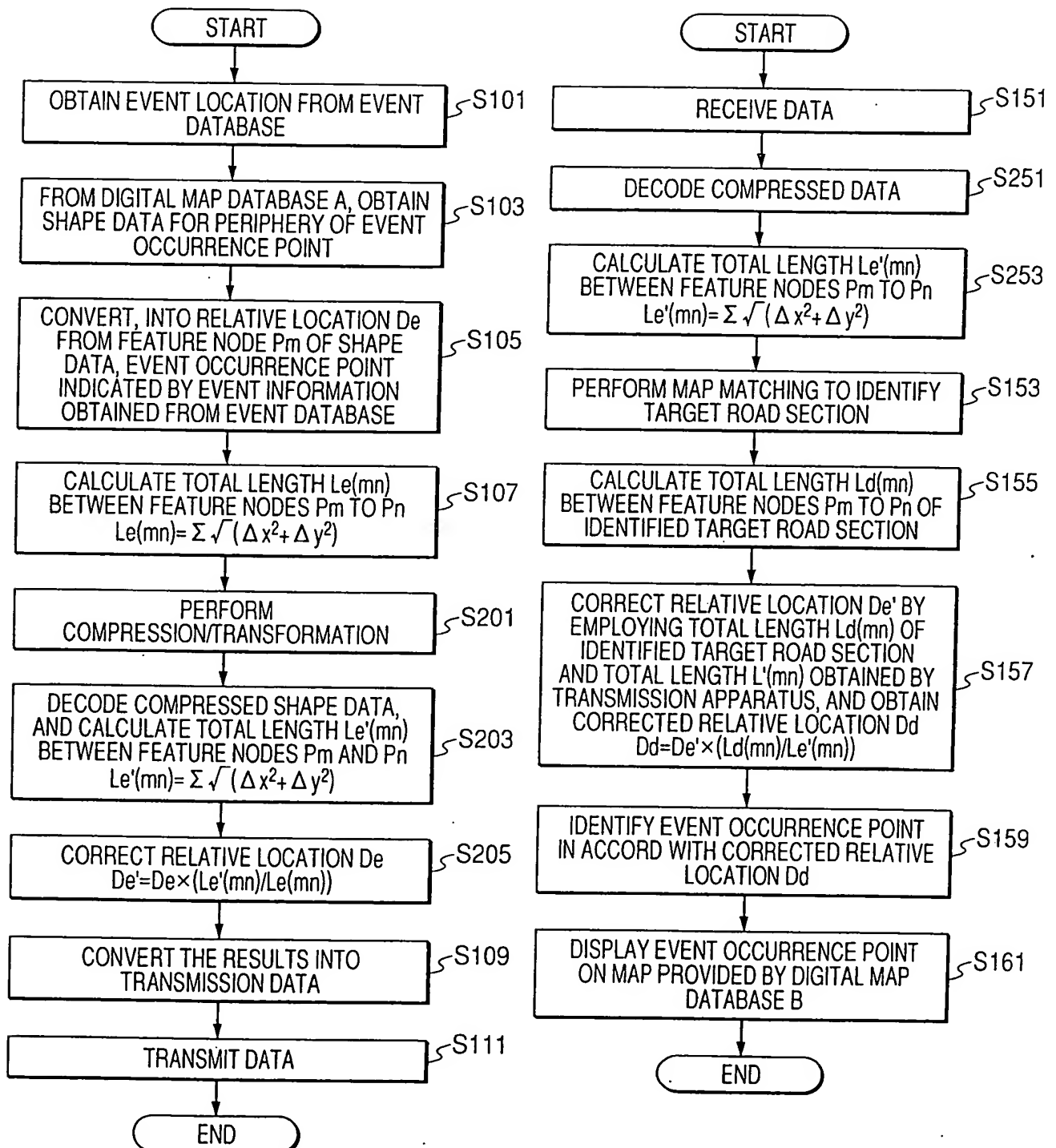


FIG. 11

SHAPE DATA ATTRIBUTE INFORMATION

SHAPE DATA IDENTIFICATION NUMBER (=56)
NODE NUMBER (=P1: HEAD)
NODE TYPE CODE
NODE NUMBER (=Pm')
NODE TYPE CODE
NODE NUMBER (=Pn')
NODE TYPE CODE
}
NODE NUMBER (=Pz': TERMINAL)
NODE TYPE CODE
} }
SHAPE DATA ARRAY IDENTIFICATION NUMBER (=999)
} }

FIG. 12

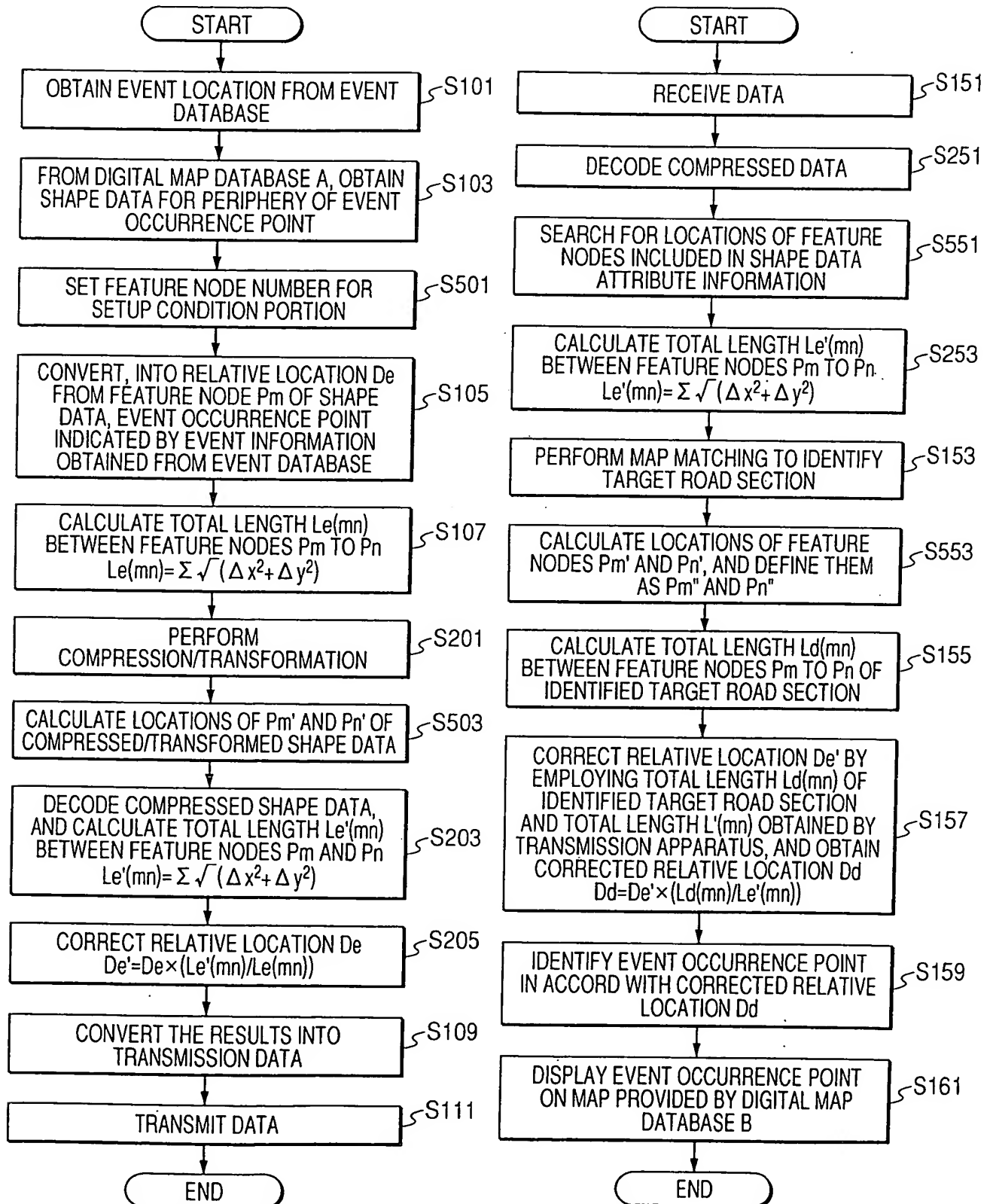


FIG. 13(a)

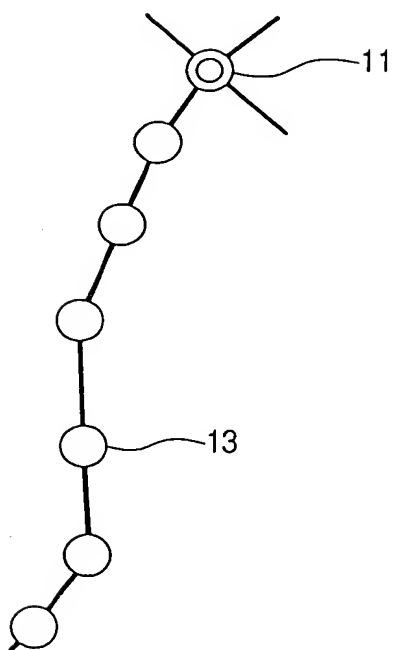


FIG. 13(b)

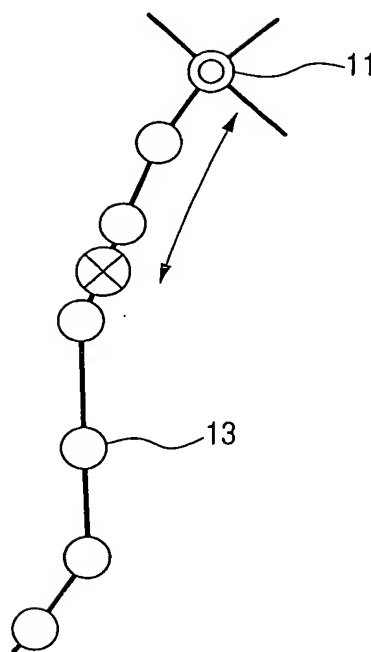


FIG. 14(a)

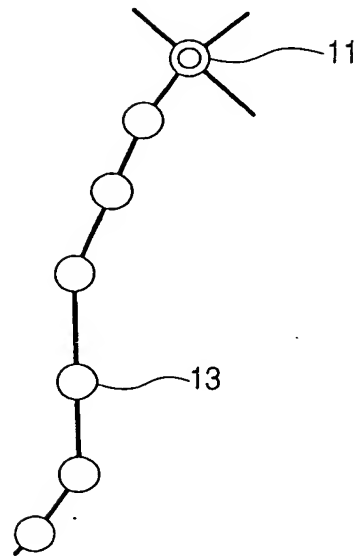
SHAPE DATA ARRAY

SHAPE DATA ARRAY IDENTIFICATION NUMBER=1
VECTOR DATA TYPE (=ROAD)
TOTAL NUMBER OF NODES
NODE NUMBER p1
ABSOLUTE X-DIRECTIONAL NODE 1 COORDINATE (LONGITUDE)
ABSOLUTE Y-DIRECTIONAL NODE 1 COORDINATE (LATITUDE)
ABSOLUTE BEARING OF NODE 1
}
NODE NUMBER pN
RELATIVE NODE N COORDINATE (xn)
RELATIVE NODE N COORDINATE (yn)
RELATIVE BEARING OF NODE N
} }
SHAPE DATA ARRAY IDENTIFICATION NUMBER=56
} }
SHAPE DATA ARRAY IDENTIFICATION NUMBER=100
}

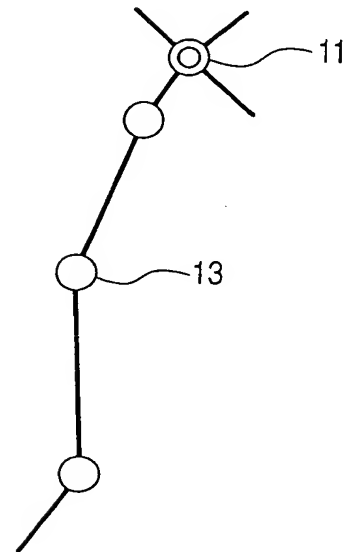
FIG. 14(b)

EVENT INFORMATION

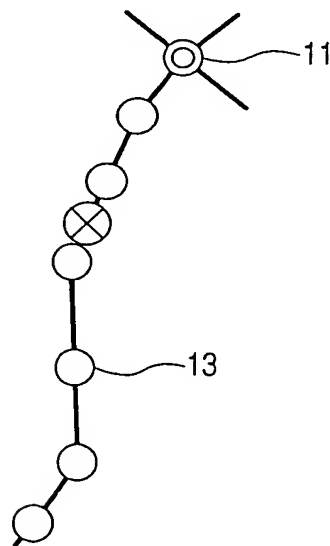
REFERENCE SHAPE DATA ARRAY NUMBER=56
EVENT 1 (=VEHICLE TRAFFIC SUSPENSION EVENT)
DETAILED EVENT INFORMATION (E.G., VEHICLE TRAFFIC SUSPENSION)
RELATIVE LOCATION (=Da) OF EVENT
DIRECTION IDENTIFICATION FLAG (=1)
}
EVENT n (TRAFFIC CONGESTION)
CONGESTION RANK
RELATIVE LOCATION 1 (=Dj1) OF EVENT (CONGESTION START SIDE)
RELATIVE LOCATION 1 (=Dj2) OF EVENT (CONGESTION END SIDE)

FIG. 15(a)

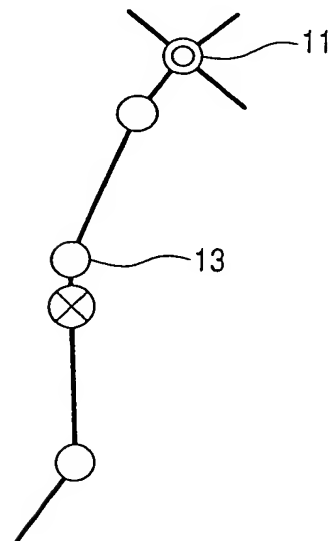
DIGITAL MAP DATABASE
PROVIDED BY COMPANY A

FIG. 15(b)

DIGITAL MAP DATABASE
PROVIDED BY COMPANY B

FIG. 16(a)

DIGITAL MAP DATABASE
PROVIDED BY COMPANY A

FIG. 16(b)

DIGITAL MAP DATABASE
PROVIDED BY COMPANY B

FIG. 17

HEADER INFORMATION (INFORMATION TYPE/SECTION DEFINITION, ETC.)	
NODE COUNT N	
NODE NUMBER 1	
NODE ATTRIBUTE INFORMATION FOR NODE 1	
LONGITUDE OF NODE 1	LATITUDE OF NODE 1
NUMBER OF NODES CONNECTED TO NODE 1	
CONNECTED NODE NUMBER #1	LINK NUMBER #1-1
}	
CONNECTED NODE NUMBER #m	LINK NUMBER #1-m
{ }	
NODE NUMBER N	
NODE ATTRIBUTE INFORMATION FOR NODE N	
LONGITUDE OF NODE N	LATITUDE OF NODE N
NUMBER OF NODES CONNECTED TO NODE N	
CONNECTED NODE NUMBER #1	LINK NUMBER #N-1
{ }	
CONNECTED NODE NUMBER #m	LINK NUMBER #N-m
LINK COUNT L	
LINK NUMBER 1	
LINK ATTRIBUTE INFORMATION FOR LINK 1	
NUMBER OF INTERPOLATION POINTS FOR LINK 1	
LONGITUDE OF INTERPOLATION POINT 1-1	LATITUDE OF INTERPOLATION POINT 1-1
{ }	
LONGITUDE OF INTERPOLATION POINT 1-p	LATITUDE OF INTERPOLATION POINT 1-p
{ }	
LINK NUMBER L	
LINK ATTRIBUTE INFORMATION FOR LINK L	
NUMBER OF INTERPOLATION POINTS FOR LINK L	
LONGITUDE OF INTERPOLATION POINT L-1	LATITUDE OF INTERPOLATION POINT L-1
{ }	
LONGITUDE OF INTERPOLATION POINT L-p	LATITUDE OF INTERPOLATION POINT L-p

FIG. 18

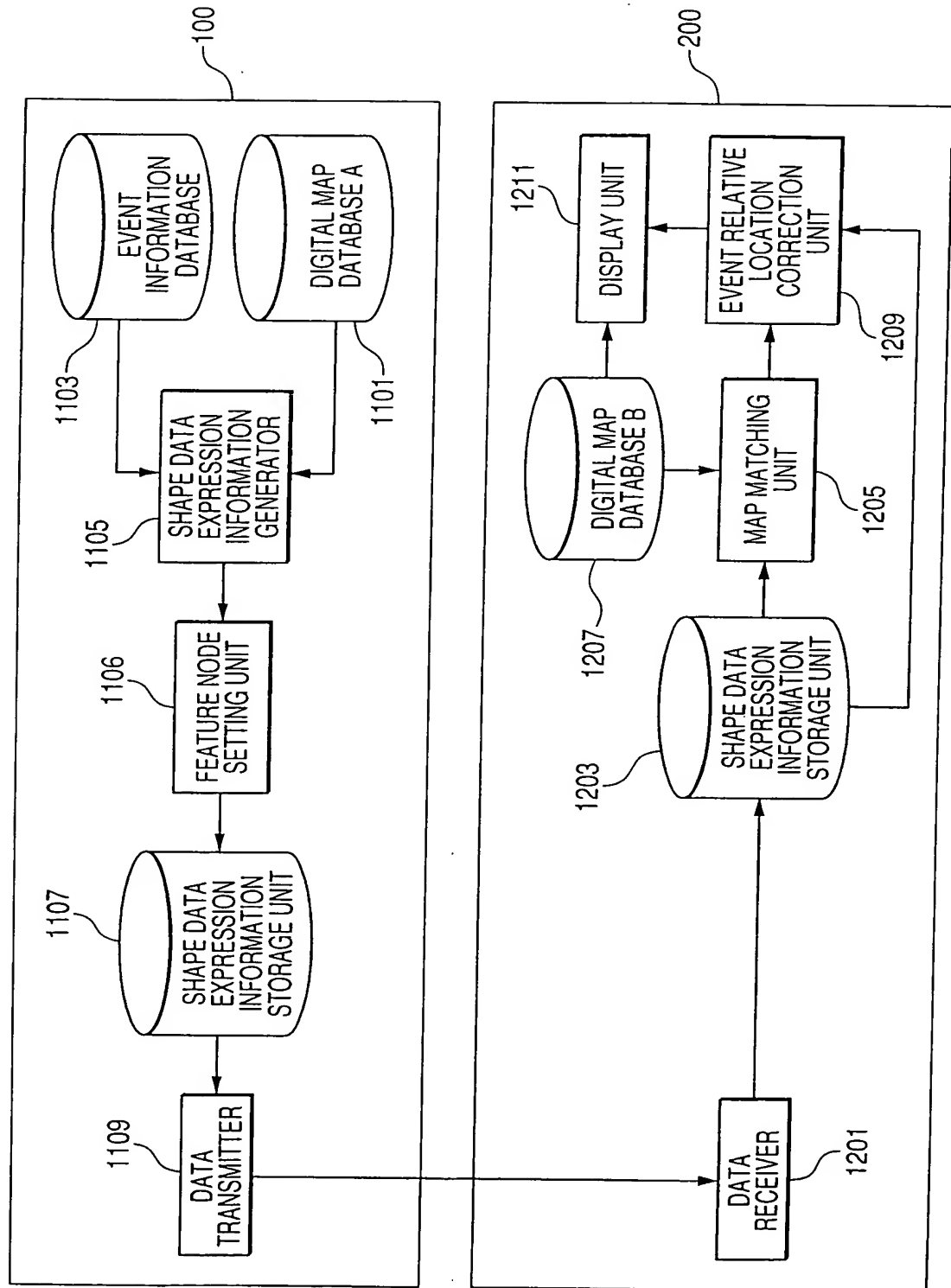


FIG. 19(a)

SHAPE DATA ARRAY

SHAPE DATA ARRAY IDENTIFICATION NUMBER=1
VECTOR DATA TYPE (=ROAD)
TOTAL NUMBER OF NODES
NODE NUMBER p1
ABSOLUTE X-DIRECTIONAL NODE 1 COORDINATE (LONGITUDE)
ABSOLUTE Y-DIRECTIONAL NODE 1 COORDINATE (LATITUDE)
ABSOLUTE BEARING OF NODE 1
§
NODE NUMBER pN
RELATIVE NODE N COORDINATE (xn)
RELATIVE NODE N COORDINATE (yn)
RELATIVE BEARING OF NODE N
§ §
SHAPE DATA ARRAY IDENTIFICATION NUMBER=56
§ §
SHAPE DATA ARRAY IDENTIFICATION NUMBER=100
§

FIG. 19(b)

EVENT INFORMATION

REFERENCE SHAPE DATA ARRAY NUMBER (=56)
EVENT 1 (=VEHICLE TRAFFIC SUSPENSION EVENT)
DETAILED EVENT INFORMATION (E.G., VEHICLE TRAFFIC SUSPENSION)
NODE NUMBER 1 (Pm') NODE NUMBER 2 (Pn')
RELATIVE LOCATION OF EVENT FROM Pm'
DIRECTION IDENTIFICATION FLAG (=1)
§
EVENT n (TRAFFIC CONGESTION)
CONGESTION RANK
NODE NUMBER 1 (Pm') NODE NUMBER 2 (Pn')
RELATIVE LOCATION 1 OF EVENT FROM Pm' (CONGESTION START SIDE)
RELATIVE LOCATION 1 OF EVENT FROM Pm' (CONGESTION END SIDE)

FIG. 19(c)

FEATURE NODE INFORMATION

SHAPE DATA IDENTIFICATION NUMBER (=1)
NODE NUMBER Pm OF FEATURE NODE #1
NODE NUMBER Pn OF FEATURE NODE #2
DISTANCE BETWEEN FEATURE NODES #1 AND #2
§
SHAPE DATA IDENTIFICATION NUMBER (=Z)
NODE NUMBER Pm' OF FEATURE NODE #p
NODE NUMBER Pn' OF FEATURE NODE #q
DISTANCE BETWEEN FEATURE NODES #p AND #q

FIG. 20(a)

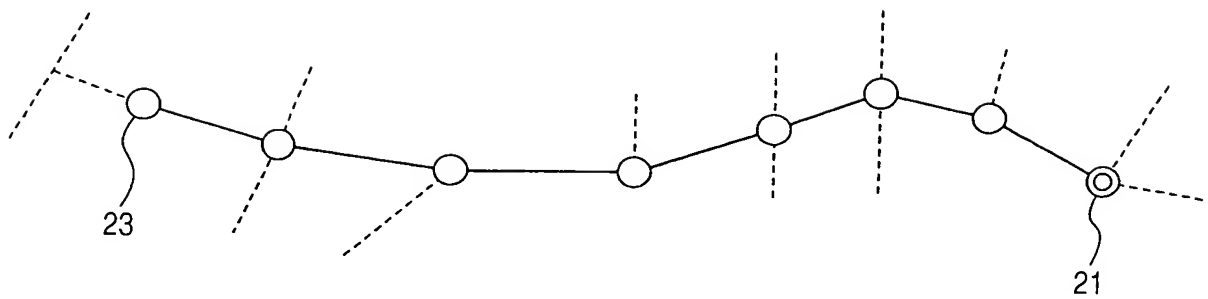


FIG. 20(b)

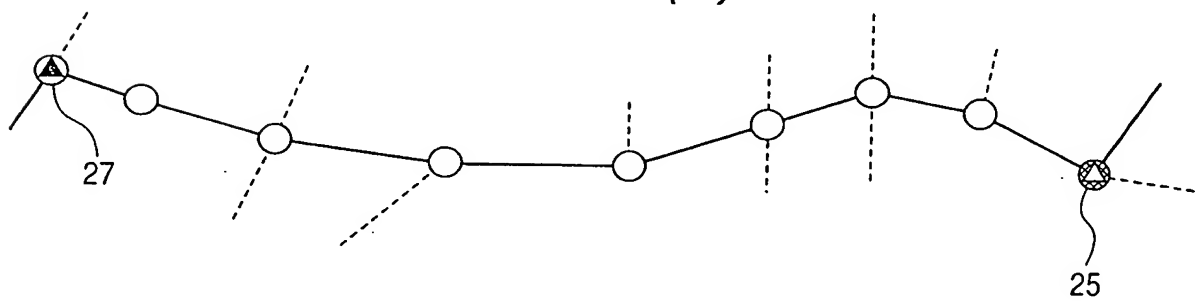


FIG. 20(c)

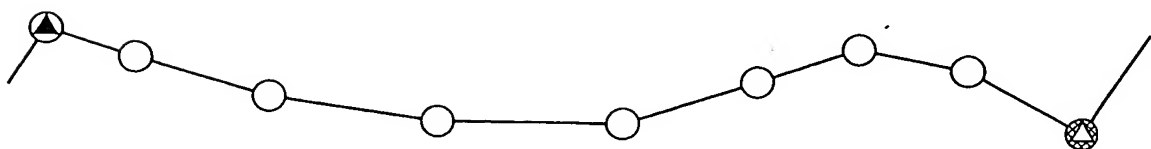


FIG. 21(a)

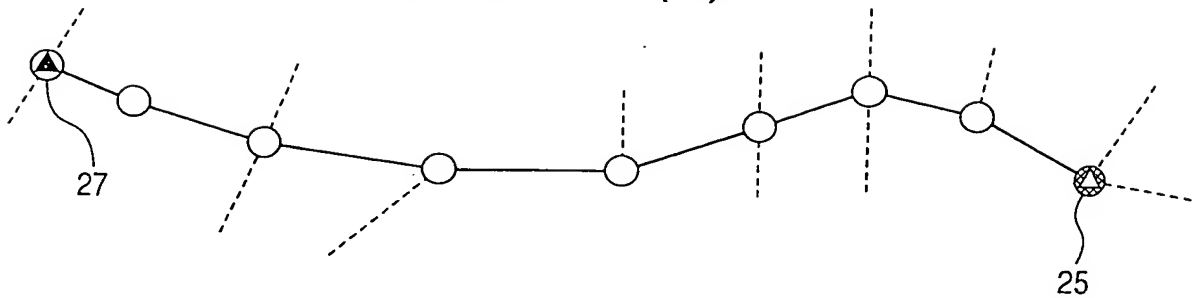


FIG. 21(b)

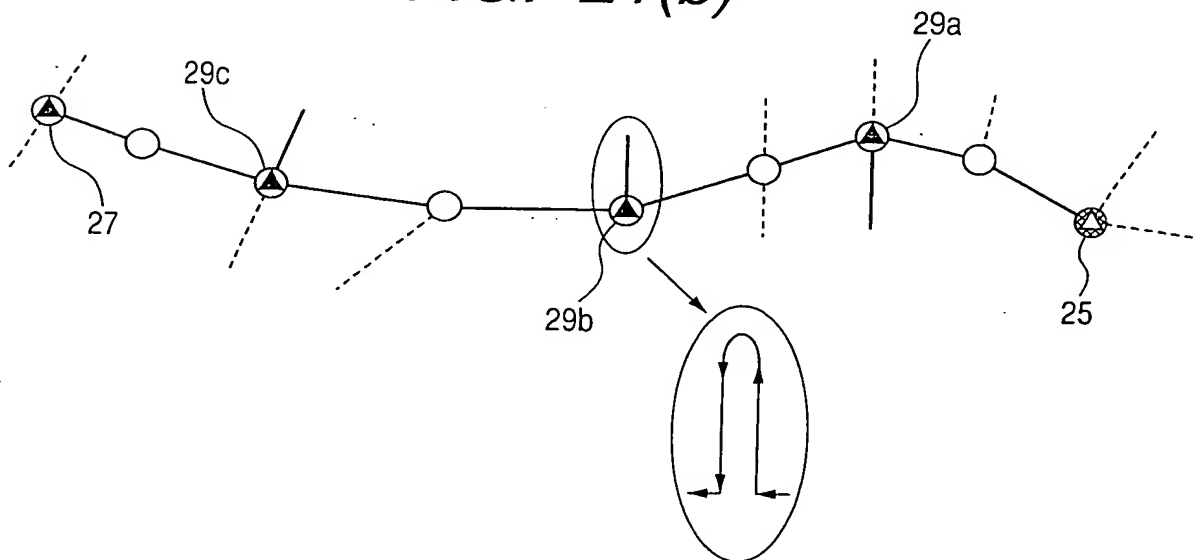


FIG. 21(c)

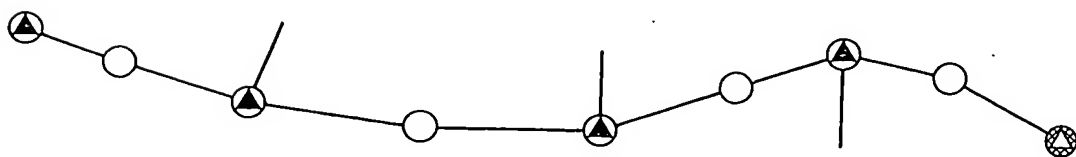


FIG. 22

EVENT INFORMATION

REFERENCE SHAPE DATA ARRAY NUMBER (=56)	
EVENT 1 (=VEHICLE TRAFFIC SUSPENSION EVENT)	
DETAILED EVENT INFORMATION (E.G., VEHICLE TRAFFIC SUSPENSION)	
NODE NUMBER 1 (Pm')	NODE NUMBER 2 (Pn')
RELATIVE LOCATION OF EVENT FROM Pm'	
DIRECTION IDENTIFICATION FLAG (=1)	
}	
EVENT n (TRAFFIC CONGESTION)	
CONGESTION RANK	
NODE NUMBER 1 (Pm')	NODE NUMBER 2 (Pn')
RELATIVE LOCATION 1 OF EVENT FROM FEATURE NODE Pm' (CONGESTION START SIDE)	
RELATIVE LOCATION 1 OF EVENT FROM FEATURE NODE Pm' (CONGESTION END SIDE)	

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FIG. 23

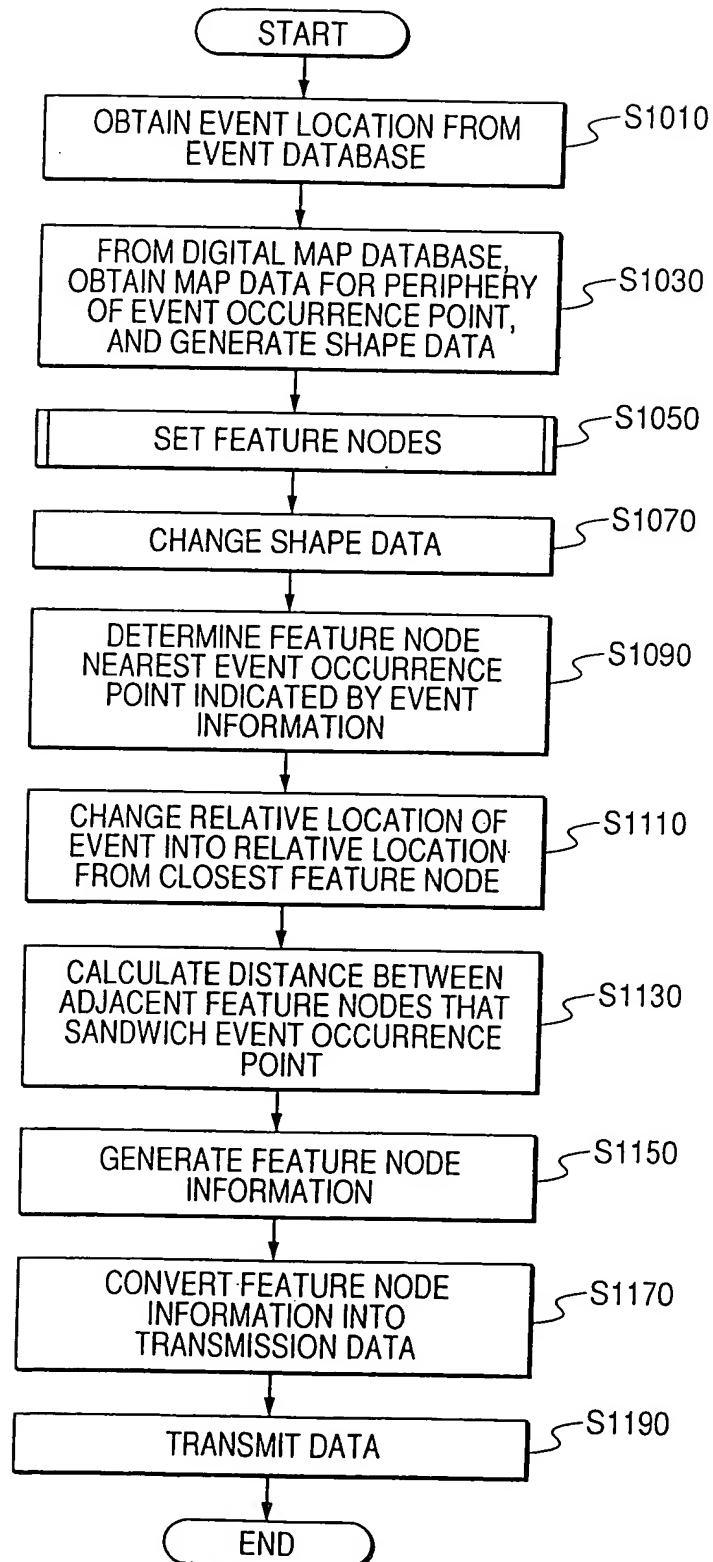


FIG. 24

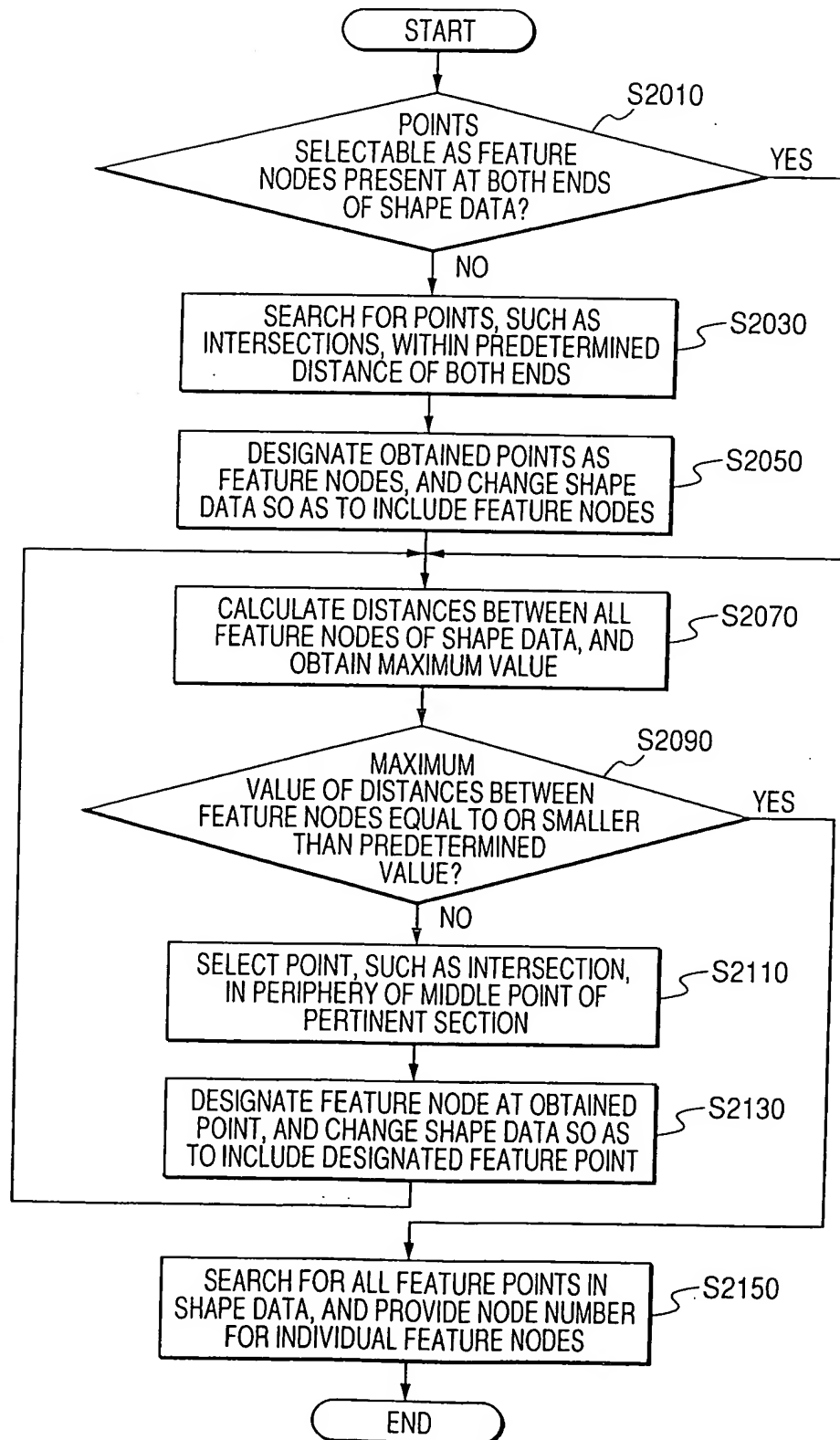


FIG. 25

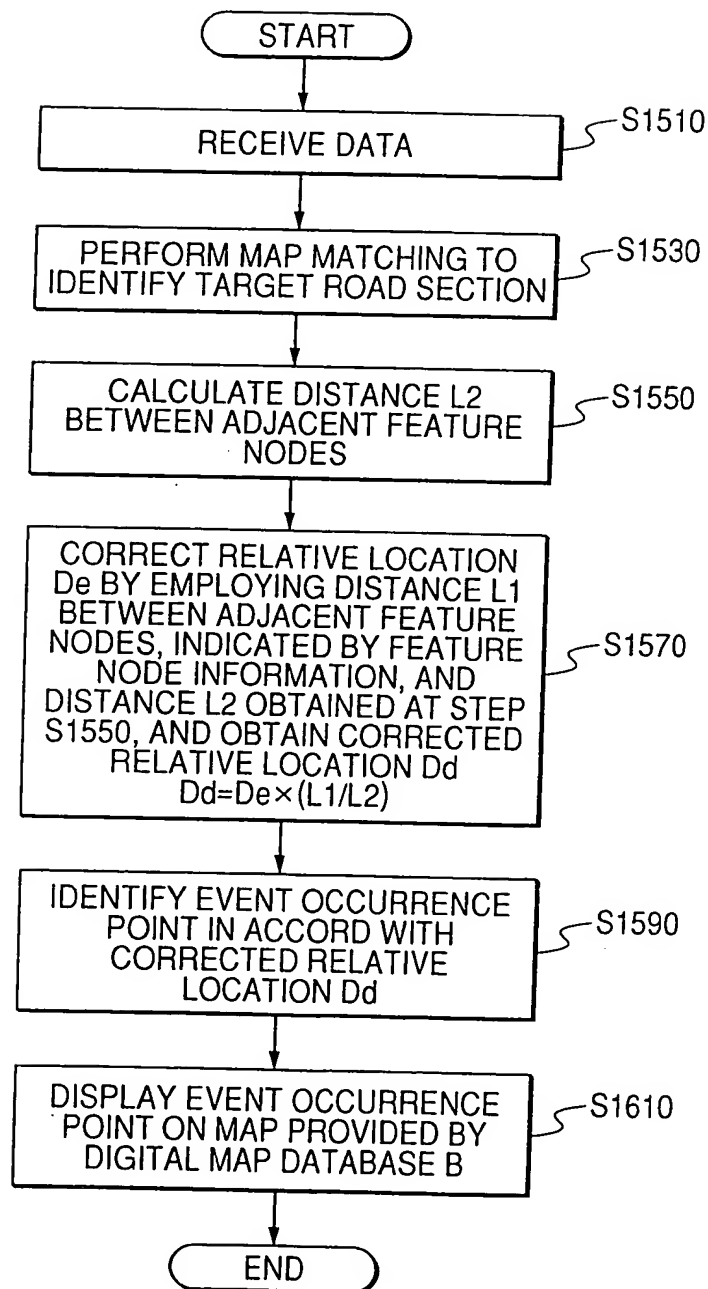


FIG. 26(a)

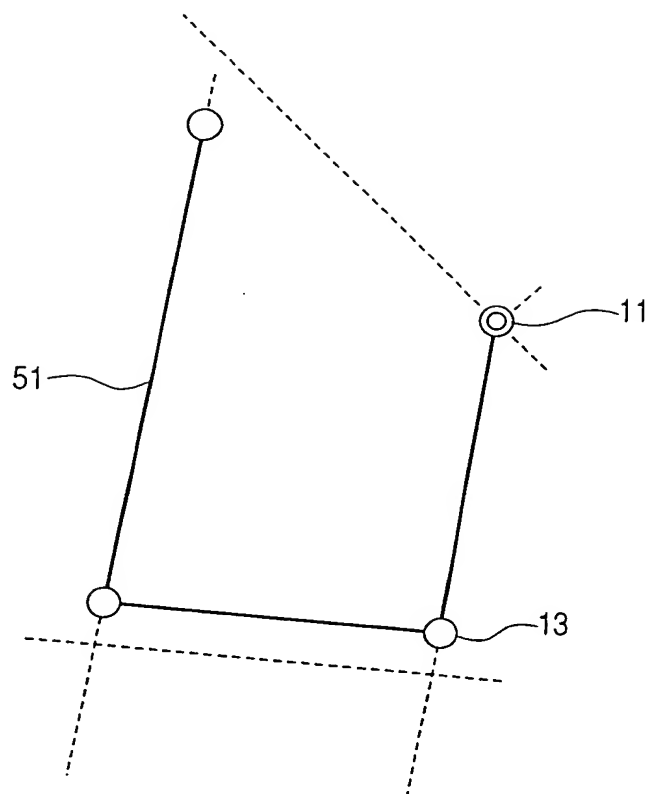


FIG. 26(b)

